WHAT IS CLAIMED IS:

1. A method for detecting the presence of a mould infection in a subject comprising identifying 5.8S ribosomal RNA of a mould, or a DNA encoding said RNA in a sample obtained from the subject.

2. The method of claim 1, wherein the mould is an invasive mould infection.

3. The method of claim 1, wherein the mould is a non-invasive mould infection.

4. The method of claim 1, comprising mixing the sample with a nucleic acid encoding said RNA.

5. The method of claim 4, comprising mixing the sample with a primer that hybridizes to the nucleic acid encoding said RNA.

6. The method of claim 4, further comprising amplifying the sample encoding said RNA.

7. The method of claim 6, comprising determining the presence or absence of an amplification product in the sample.

8. The method of claim 1, wherein the sample is a nucleic acid containing sample.

9. The method of claim 8, wherein the nucleic acid containing sample is a DNA sample.

10. The method of claim 8, wherein the nucleic acid containing sample is a RNA sample.

11. The method of claim 7, further comprising quantitating the amplification product whereby the amount of mould nucleic acid is quantitated.

12. The method of claim 11, wherein said quantitating comprises:

a) mixing a first probe capable of hybridizing to a nucleic acid sequence of said mould in an amplification reaction;

b) mixing a second probe capable of hybridizing to a standard nucleic acid that is amplified to a pre-determined quantity in the amplification reaction of step (a); and

c) comparing the signal of the amplification reaction of step (a) to the signal of the amplification reaction containing the standard nucleic acid.

13. The method of claim 12, wherein the comparing is in the exponential phase of the amplification.

14. The method of claim 12, wherein the first probe comprises nucleic acids that hybridize to the nucleic acid sequence of SEQ ID NO:1, SEQ ID NO:5 or SEQ ID NO:6 or fragments thereof.

15. The method of claim 12, wherein the second probe comprises nucleic acids that hybridize to the nucleic acid sequence of SEQ ID NO:1, SEQ ID NO:5 or SEQ ID NO:6 or fragments thereof.

16. The method of claim 12, wherein the probe comprises the sequence 5'-TGAAGAACGCAGCGAAATGCGATAA-3' (SEQ ID NO:4).

17. The method of claim 12, wherein the probe comprises the sequence of SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID. NO:18, SEQ ID NO:19, SEQ ID NO:20, or SEQ ID NO:21.

18. The method of claim 12, wherein said first or said second probe is labeled.

19. The method of claim 18, wherein the label is a fluorescent label.

20. The method of claim 19, wherein said fluorescent label is 6-carboxyfluorescein (FAM), 6-carboxy-N,N,N',N'-tetramethylrhodamine (TAMRA), Alexa 350, Alexa 430, AMCA, BODIPY 630/650, BODIPY 650/665, BODIPY-FL, BODIPY-R6G, BODIPY-TMR, BODIPY-TRX, Cascade Blue, Cy3, Cy5,6-FAM, Fluorescein, HEX, 6-JOE, Oregon Green 488, Oregon Green 500, Oregon Green 514, Pacific Blue, REG, Rhodamine Green, Rhodamine Red, ROX, TAMRA, TET, Texas Red, VIC, or DABCYL.

21. The method of claim 20, wherein the probe comprises the sequence 5'-6-FAM-TGAAGAACGCAGCGAAATGCGATAA-TAMRA-3' (SEQ ID NO:4).

22. The method of claim 6, wherein the amplifying is preceded by a reverse transcription reaction.

23. The method of claim 1, wherein the mould belongs to *Aspergillus* species, *Fusarium* species, or *Scedosporium* species.

24. The method of claim 23, wherein said mould is of the *Aspergillus* species.

25. The method of claim 24, wherein said mould is *Aspergillus fumigatus, Aspergillus flavus, Aspergillus terreus, Aspergillus vesicularis, Aspergillus nidulans,* or *Aspergillus niger.*

26. The method of claim 23, wherein said mould is of the *Fusarium* species.

27. The method of claim 26, wherein said mould is *Fusarium solani.*

28. The method of claim 23, wherein said mould is of the *Scedosporium* species.

29. The method of claim 28, wherein said invasive mould is *Scedosporium prolificans.*

30. The method of claim 1, where said sample comprises serum, blood, plasma, cells, tissues, aspirates, biopsies, fine needle aspirates, skin biopsies, lymph fluid or urine.

31. The method of claim 1, where said sample comprises serum.

32. The method of claim 5, wherein said primers are comprised of nucleic acids that hybridize to the nucleic acid sequence comprised in SEQ ID NO: 1 or fragments or variant thereof.

33. The method of claim 32, wherein said primers comprise the nucleic acid sequence TTGGTTCCGGCATCGA (SEQ ID NO:2).

34. The method of claim 32, wherein said primers comprise the nucleic acid sequence SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:13, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, or SEQ ID NO:25.

35. The method of claim 32, wherein said primers comprise the nucleic acid sequence GCAGCAATGACGCTCGG (SEQ ID NO:3).

36. The method of claim 32, wherein said primers comprise the nucleic acid sequence SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, or SEQ ID NO:29.

37. The method of claim 4, wherein said primers are comprised of nucleic acids that hybridize to the nucleic acid sequence comprised in SEQ ID NO: 5 or fragments or variant thereof.

38. The method of claim 4, wherein said primers are comprised of nucleic acids that hybridize to the nucleic acid sequence comprised in SEQ ID NO: 6 or fragments variant thereof.

39. The method of claim 4, wherein said primers are comprised of nucleic acids that hybridize to the nucleic acid sequence comprised in SEQ ID NO: 7 or fragments variant thereof.

40. The method of claim 4, wherein said primers are comprised of nucleic acids that hybridize to the nucleic acid sequence comprised in SEQ ID NO: 8 or fragments variant thereof.

41. The method of claim 6, wherein said amplifying is by polymerase chain reaction.

42. The method of claim 7, wherein said determining is in real time.

43. The method of claim 1, wherein the detecting is in a detection range of 1 fg to 20 ng of DNA.

44. The method of claim 1, wherein the detecting is in a detection range of 1 fg to 800 fg of DNA.

45. The method of claim 1, wherein the detecting is in a detection range of 100 fg to 200 fg of DNA.

46. The method of claim 1, further comprising obtaining said sample from the subject.

47. The method of claim 1, further comprising isolating nucleic acids from said sample.

48. A kit for detecting an mould in a biological sample comprising:

a) primers that hybridize to 5.8S ribosomal RNA of an mould, or DNA encoding said RNA; and

b) reagents for an amplification reaction comprising a heat-stable DNA polymerase enzyme, buffers, water, magnesium chloride, and deoxynucleotides;

each enclosed in a suitable container means.

49. The kit of claim 48, wherein the primers comprise nucleic acids to the nucleic acid sequence of SEQ ID NO:1, SEQ ID NO:5 or SEQ ID NO:6 or fragments thereof.

50. The kit of claim 48, wherein the primers comprise nucleic acids to the nucleic acid sequence of SEQ ID NO:7, or SEQ ID NO:8 or fragments thereof.

51. The kit of claim 48, wherein the primers comprise the nucleic acid sequence TTGGTTCCGGCATCGA (SEQ ID NO:2).

52. The kit of claim 48, wherein the primers comprise the nucleic acid sequence SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:13, SEQ ID. NO:22, SEQ ID NO:23, SEQ ID NO:24, or SEQ ID NO:25.

53. The kit of claim 48, wherein the primers comprise the nucleic acid sequence GCAGCAATGACGCTCGG (SEQ ID NO:3).

54. The kit of claim 48, wherein the primers comprise the nucleic acid sequence SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, or SEQ ID NO:29.

55. The kit of claim 48, further comprising one or more probe that hybridize to ribosomal RNA of the mould or fragments thereof.

56. The kit of claim 55, wherein the ribosomal RNA comprises one or more probe that hybridize to the 5.8S ribosomal RNA of the mould or fragments thereof.

57. The kit of claim 55, wherein said probes comprise nucleic acids that hybridize to the nucleic acid sequence of SEQ ID NO:1, SEQ ID NO:5 or SEQ ID NO:6 or fragments thereof.

58. The kit of claim 55, wherein the probe comprises the sequence 5'-TGAAGAACGCAGCGAAATGCGATAA-3' (SEQ ID NO:4).

59. The kit of claim 55, wherein the probe comprises the sequence of SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, or SEQ ID NO:21.

60. The kit of claim 55, wherein the one or more probe is labeled.

61. The kit of claim 48, further comprising reagents to isolate nucleic acids from the sample.

62. The kit of claim 61, wherein said nucleic acid isolated is mRNA.

63. The kit of claim 61, wherein said nucleic acid isolated is DNA.

64. A method for purification of a nucleic acid encoding 5.8S ribosomal RNA of a mould in a nucleic acid containing sample comprising:

a) obtaining said nucleic acid containing sample from a subject;
b) incubating the sample with a lysis reagent for about at least 60 minutes;
c) vortexing the sample intermittently to mix; and
d) centrifuging the sample at greater than 3000 x g for 5 min.

65. The method of claim 64, wherein the sample is incubated at about 50°C.

66. The method of claim 64, wherein the sample is incubated at about 37°C.

67. The method of claim 64, wherein the sample is centrifuged at about 6000 x g for 15 minutes.

68. A method for enhancing binding of a nucleic acid encoding 5.8S ribosomal RNA of a mould to silica beads comprising:

a) washing the silica beads with sodium acetate of about pH 5.2;
b) mixing the silica beads of step (a) by vortexing; and
c) centrifuging the silica beads at about 1000 rpm for at least 1 minute.

69. The method of claim 68, wherein the silica beads of step (a) are washed at least 5 times.

70. The method of claim 69, wherein the silica beads are centrifuged at least at 12000 rpm.

71. The method of claim 69, comprising selecting silica beads of particle size ranging from 5 μM to 10 μM.

72. The method of claim 68, wherein the sodium acetate is about 0.05 M to 2.5 M.

73. The method of claim 72, wherein the sodium acetate is 0.1 M.

74. The method of claim 68, further comprising mixing said silica beads with a nucleic acid containing sample from a subject comprising a nucleic acid encoding 5.8S ribosomal RNA of a mould.